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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Pham et al.

One of the application of:

Pham et al.

Application No. 10/676,388

Application No. 10/676,388

Filed: September 30, 2003

For: SYSTEM, METHOD AND APPARATUS
FOR APPLYING LIQUID TO A CMP
POLISHING PAD

POLISHING PAD

Group Art Unit: 3723

Examiner: THOMAS, D.

Atty. Docket No. LAM2P441

Date: April 4, 2005

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on April 4, 2005.

Signed: Malida M. Word

SUBMISSION AFTER ALLOWANCE

Commissioner for Patents Alexandria, VA 22313-1450

Dear Sir:

Applicant respectfully requests this Submission After Allowance be placed in the file with the references. The references listed in the attached PTO Form 1449, copies of which are attached, may be material to examination of the above-identified patent application. Applicants submit these references in compliance with their duty of disclosure pursuant to 37 CFR §§ 1.56 and 1.97.

Applicant states that each item of information listed in the attached PTO Form 1449 was cited in a communication in a counterpart international application not more than three months prior to the filing of this statement. For the Examiner's use and information, a copy of the International Search Report in the corresponding international application is attached.

The International Searching Authority interprets US Pat 6,283,840 by Huey (hereafter the Huey reference) as the single "X" reference (i.e., a "document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone.") identified in the international search report.

Applicant respectfully submits that the Huey reference is a cumulative reference in view of the Kimura reference (US Pat App 2002/0023715 A1) that was cited by the Examiner and overcome in the previously filed communications to the PTO. In sum, the Huey reference teaches much higher flow rates of slurry (e.g., about 0.2 to 1.0 gallon per minute (about 750 cc to about 3800 cc per minute)) as compared to the 100 cc per minute slurry flow rate taught by the Applicant's application (See Col. 4, Ln. 20-35 of the Huey reference).

Applicant submits that, the Huey reference therefore does not teach nor suggest a method of delivering a liquid to a CMP polishing pad that includes supplying the liquid to a nozzle, the nozzle being oriented toward a polishing surface of the CMP polishing pad. The liquid flows at a rate of less than or equal to about 100 cc per minute. A pressurized carrier gas is also supplied to the nozzle simultaneously with the liquid. The liquid is substantially evenly sprayed from the nozzle onto the CMP polishing pad.

Applicant believes that no fees are due for this submission, however, the Commissioner is authorized to charge any additional fees that may be due to our Deposit Account No. 50-0805 (Order No. LAM2P441).

Respectfully submitted,

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		INFORMATION			First Named Inventor	Pham
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U.S. Patent Documents

Examiner Initials	Cite No.1	Document Number Number-Kind Code ^{2 (if known)}	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, where Relevant Passages or Relevant Figures Appear
	В	2002/061722	May 23, 2002	Takasaki et al.	
	Α	6,283,840	Sept. 4, 2001	Huey	
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Foreign Patent Documents

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Examiner Initial	Cite No.1	Foreign Patent Document No.	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited	Pages, Columns, Lines, where Relevant Passages or Relevant Figures	T ⁶
		Country Code ³ -Number- ⁴ Kind Code ^{5(if known)}		Document	Appear	
	J	WO 02/096600	Dec. 5, 2002	Koninkl Philips Electronics NV		
	ı	WO 03/011523	May 23, 2002	Applied Materials		
	K					
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Non Patent Literature Documents

Examiner Initial	Cite No.	Include name of author (in CAPTIAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published
	N	International Search Report
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	Q	

Examiner	Date
Signature	Considered

Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.